Figure 1: Alignment of SCS006 to ABA90222, AAB40530 and ENSP277300

```
        SCS0006      LTAAEQSAER AAMALARPGT PDPQALASVL LLLLWAPALS LLAGTVPSEP
        AAB40530     .......... .......... .......... .......... ..........
     5  ABA90222     .......... .......... .......... .......... ..........
        ENSP277300   .......... .......... .......... .......... ..........


        SCS0006      PSACASDPCA PGTECQATES GGYTCGPMEP RGCATQPCHH GALCVPQGPD
    10  AAB40530     .......... .......... .......... .......... ..........
        ABA90222     .......... .......... .......... .......... ..........
        ENSP277300   ...CASDPCA PGTECQATES GGYTCGPMEP RGCATQPCHH GALCVPQGPD


    15  SCS0006      PNGFRCYCVP GFQGPRCELD IDECASRPCH HGATCRNLAD RYECHCPLGY
        AAB40530     .......... .......... ..:....... .......... ..........
        ABA90222     .......... .......... .......... .......... ..........
        ENSP277300   PTGFRCYCVP GFQGPRCELD IDECASRPCH HGATCRNLAD RYECHCPLGY


    20
        SCS0006      AGVTCEMEVD ECASAPCLHG GSCLDGVGSF RCVCAPGYGG TRCQLDLDEC
        AAB40530     .......... .......... ASCLEGLGSF RCLCWPGYSG ELCEVDEDEC
        ABA90222     .......... .......... ASCLEGLGSF RCLCWPGYSG ELCEVDEDEC
        ENSP277300   AGVTCEMEVD ECASAPCLHG GSCLDGVGSF RCVCAPGYGG TRCQLDLDEC
    25

        SCS0006      QSQPCAHGGT CHDLVNGFRC DCAGTGYEGT HCEREVLECA SAPCEHNASC
        AAB40530     ASSPCQHGGR CLQRSD.... ..P....... .....ALYGG VQAAFPGAFS
        ABA90222     ASSPCQHGGR CLQRSD.... ..P....... .....ALYGG VQAAFPGAFS
    30  ENSP277300   QSQPCAHGGT CHDLVNGFRC DCAGTGYEGT HCEREVLECA SAPCEHNASC


        SCS0006      LEGLGSFRCL CWPGYSGELC EVDEDECASS PCQHGGRCLQ RSDPALYGGV
        AAB40530     FRHAAGFLCH CPPGFEGADC GVEVDECASR PCLNGGHCQD LPN.......
    35  ABA90222     FRHAAGFLCH CPPGFEGADC GVEVDECASR PCLNGGHCQD LPN.......
        ENSP277300   LEGLGSFRCL CWPGYSGELC EVDEDECASS PCQHGGRCLQ RSDPALYGGV


        SCS0006      QAAFPGAFSF RHAAGFLCHC PPGFEGPTCE EDVDECLSDP CLHGGTCSDT
    40  AAB40530     .......... ....GFQCHC PDGYAGPTCE EDVDECLSDP CLHGGTCSDT
        ABA90222     .......... ....GFQCHC PDGYAGPTCE EDVDECLSDP CLHGGTCSDT
        ENSP277300   QAAFPGAFSF RHAAGFLCHC PPGFEGPTCE EDVDECLSDP CLHGGTCSDT


    45  SCS0006      VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC
        AAB40530     VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC
        ABA90222     VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SG VHSYVCHC
        ENSP277300   VAGYICRCPE TWGGRDCSVQ LTGCQGHTCP LAATCIPIFE SGVHSYVCHC


    50
        SCS0006      PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
        AAB40530     PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
        ABA90222     PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
        ENSP277300   PPGTHGPFCG QNTTFSVMAG SPIQASVPAG GPLGLALRFR TTLPAGTLAT
    55

        SCS0006      RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLALND GHWHQVEVVL
        AAB40530     RNDTKES... .......... .......... .......... ..........
        ABA90222     RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLA... ..........
    60  ENSP277300   RNDTKESLEL ALVAATLQAT LWSYSTTVLV LRLPDLALND GHWHQVEVVL


        SCS0006      HLATLELRLW HEGCPARLCV ASGPVALAST ASATPLPAGI SSAQLGDATF
        AAB40530     .......... .......... .......... .......... ..........
    65  ABA90222     .......... .......... .......... .......... ..........
        ENSP277300   HLATLELRLW HEGCPARLCV ASGPVALAST ASATPLPAGI SSAQLGDATF


        SCS0006      AGCLQDVRVD GHLLLPEDLG ENVLLGCERR EQCRPLPCVH GGSCVDLWTH
```

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AAB40530      ..........  ...........  ...........  ...........  ...........
ABA90222      ..........  ...........  ...........  ...........  ...........
ENSP277300    AGCLQDVRVD  GHLLLPEDLG  ENVLLGCERR  EQCRPLPCVH  GGSCVDLWTH
```

5

```
        SCS0006     FRCDCARPHR GPTCADEIPA ATFGLGGAPS SASFLLQELP GPNLTVSFLL
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  FRCDCARPHR GPTCADEIPA ATFGLGGAPS SASFLLQELP GPNLTVSFLL
5

        SCS0006     RTRESAGLLL QFANDSAAGL TVFLSEGRIR AEAPGSPAVV LPGRWDDGLR
        AAB40530    .......... .......... .......... .......... ..........
10      ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  RTRESAGLLL QFANDSAAGL TVFLSEGRIR AEVPGSPAVV LPGRWDDGLR


        SCS0006     HLVMLSFGPD QLQDLGQHVH VGGRLLAADS QPWGGPFRGC LQDLRLDGCH
        AAB40530    .......... .......... .......... .......... ..........
15      ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  HLVMLSFGPD QLQDLGQHVH VGGRLLAADS QPWGGPFRGC LQDLRLDGCH


        SCS0006     LPFFPLPLDN SSQPSELGGR QSWNLTAGCV SEDMCSPDPC FNGGTCLVTW
20      AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  LPFFPLPLDN SSQPSELGGR QSWNLTAGCV SEDMCSPDPC FNGGTCLVTW


25      SCS0006     NDFHCTCPAN FTGPTCAQQL WCPGQPCLPP ATCEEVPDGF VCVAEATFRE
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  NDFHCTCPAN FTGPTCAQQL WCPGQPCLPP ATCEEVPDGF VCVAEATFRE

30
        SCS0006     GPPAAFSGHN ASSGRLLGGL SLAFRTRDSE AWLLRAAAGA LEGVWLAVRN
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  GPPAAFSGHN ASSGRLLGGL SLAFRTRDSE AWLLRAAAGA LEGVWLAVRN
35

        SCS0006     GSLAGGVRGG HGLPGAVLPI PGPRVADGAW HRVRLAMERP AAATSRWLLW
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
40      ENSP277300  GSLAGGVRGG HGLPGAVLPI PGPRVADGAW HRVRLAMERP AATTSRWLLW


        SCS0006     LDGAATPVAL RGLASDLGFL QGPGAVRILL AENFTGCLG. ..........
        AAB40530    .......... .......... .......... .......... ..........
45      ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  LDGAATPVAL RGLASDLGFL QGPGAVRILL AENFTGCLGR VALGGLPLPL


        SCS0006     .......... ..RHFASWPG TPAPILGCRG APVCAPSPCL HDGACRDLFD
50      AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  ARPRPGAAPG AREHFASWPG TPAPILGCRG APVCAPSPCL HDGACRDLFD


55      SCS0006     AFACACGPGW EGPRCEAHVD PCHSAPCARG RCHTHPDGRF ECRCPPGFGG
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  AFACACGPGW EGPRCEAHVD PCHSAPCARG RCHTHPDGRF ECRCPPGFGG

60
        SCS0006     PRCR...... .......... .......... ....LPVPSK ECSLNVTCLD
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
        ENSP277300  PRCRTQAQVA HGHSAGEGRS QVSCTHSSLC SLPRLPVPSK ECSLNVTCLD
65

        SCS0006     GSPCEGGSPA ANCSCLEGLA GQRCQVPTLP CEANPCLNGG TCRAAGGVSE
        AAB40530    .......... .......... .......... .......... ..........
        ABA90222    .......... .......... .......... .......... ..........
70      ENSP277300  GSPCEGGSPA ANCSCLEGLA GQRCQVPTLP CEANPCLNGG TCRAAGGVSE
```

```
     SCS0006      CICNARFSGQ FCEVAKGLPL PLPFPLLEVA VPAACACLLL LLLGLLSGIL
     AAB40530     .......... .......... .......... .......... ..........
     ABA90222     .......... .......... .......... .......... ..........
  5  ENSP277300   CICNARFSGQ FCEVAVS... .......... .......... ..........


     SCS0006      AARKRRQSEG TYSPSQQEVA GARLEMDSVL KVPPEERLI
     AAB40530     .......... .......... .......... .........
 10  ABA90222     .......... .......... .......... .........
     ENSP277300   .......... .......... .......... .........
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Figure 2: Alignment of SCS006 to Notch-2 preprotein (NP_077719)

```
NOTCH_2_PR    MPALRPALLW ALLALWLCCA APAHALQCRD GYEPCVNEG M CVTYHNGTGY
SCS0006       .......... .......... .......... .......... ..........

NOTCH_2_PR    CKCPEGFLGE YCQHRDPCEK NRCQNGGTCV AQAMLGKATC RCASGFTGED
SCS0006       .......... .......... .......... .......... LTAAEQSAER

NOTCH_2_PR    CQYSTS HPCF VSRPCLNGGT CHMLSRDTYE CTCQVGFTGK ECQWTDACLS
SCS0006       AAMALARPGT PD........ .....·..... .......... ..........

NOTCH_2_PR    HPCANGSTCT TVANQFSCKC LTGFTGQKCE TDVNECDIPG HCQHGGTCLN
SCS0006       .PQALASVLL LLLWAPALSL LAGTVPSE.. ........P. ..........

NOTCH_2_PR    LPGSYQCQCP QGFTGQYCDS LYVPCAPSPC VNGGTCRQTG DFTFECNCLP
SCS0006       .........P S.......... ...ACASDPC APGTECQATE ..........

NOTCH_2_PR    GFEGSTCERN IDDCPNHRCQ NGGVCVDGVN TYNCRCPPQW TGQFCTEDVD
SCS0006       ......... .. .......... .......... .......... ..........

NOTCH_2_PR    ECLLQPNACQ NGGTCANRNG GYGCVCVNGW SGDDCSENID DCAFASCTPG
SCS0006       .......... ........SG GYTCGP.... .......... ..........

NOTCH_2_PR    STCIDRVASF SCMCPEGKAG LLCHLDDACI SNPCHKGALC  DTNPLNGQYI
SCS0006       .......... ..MEPRG... .........CA TQPCHHGALC VP........

NOTCH_2_PR    CTCPQGYKGA DCTEDVDECA MANSNPCEHA GKCVNTDG AF HCECLKGYAG
SCS0006       ....QGPD.. .......... ...PN..... ........ GF RCYCVPGFQG

NOTCH_2_PR    PRCEMDINEC HSDPCQNDAT CLDKIGGFTC LCMPGFKGVH CELEINECQS
SCS0006       PRCELDIDEC ASRPCHHGAT CRNLADRYEC HCPLGYAGVT CEMEVDECAS

NOTCH_2_PR    NPCVNNGQCV DKVNRFQCLC PPGFTGPVCQ IDIDDCSSTP CLNGAKCIDH
SCS0006       APCLHGGSCL DGVGSFRCVC APGYGGTRCQ LDLDECQSQP. CA HGGTCHDL

NOTCH_2_PR    PNGYECQCAT GFTGVLCEEN IDNCDPDPCH HGQCQDGIDS YTCICNPGYM
SCS0006       VNGFRCDCAG .......... .......... .......... ......TGYE

NOTCH_2_PR    GAICSDQIDE CYSSPCLNDG RCIDLVNGYQ CNCQPGTSGV NCEINFDDCA
SCS0006       GTHCEREVLE CASAPCEHN. .......... .......... ..........

NOTCH_2_PR    SNPCIHGICM DGINRYSCVC SPGFTGQRCN IDIDECASNP CRKGATCING
SCS0006       ......ASCL EGLGSFRCLC WPGYSGELCE VDEDECASSP CQHGGRCLQ.

NOTCH_2_PR    VNGFRCICPE GPHHPSCYSQ VNECLSNPCI HGNCTGGLSG YK CLCDAGWV
SCS0006       .......... ...R...... .....SDPAL YGGVQAAFPG AFSFRHA...
```

```
        NOTCH_2_PR    GINCEVDKNE  CLSNPCQNGG  TCDNLVNGYR  CTCKKGFKGY  NCQVNIDECA
        SCS0006       ..........  ..........  ......AGFL  CHCPPGFEGP  TCEEDVDECL


   5    NOTCH_2_PR    SNPCLNQGTC  FDDISGYTCH  CVLPYTGKNC  QTVLAPCSPN  PCENAAVCKE
        SCS0006       SDPCLHGGTC  SDTVAGYICR  CPETWGGRDC  SVQLTGCQGH  TCPLAATC..


        NOTCH_2_PR    SPNFESYTCL  CAPGWQGQRC  TIDIDECISK  PCMNHGLCHN  TQGSYMCECP
   10   SCS0006       IPIFES....  ....G.....  ..........  ..........  .VHS  YVCHCP


        NOTCH_2_PR    PGFSGMDCEE  DIDDCLANPC  QNGGSCMDGV  NTFSCLCLPG  FTGDKCQTDM
        SCS0006       PGTHGPFCGQ  NTTFSVMAGS  PIQASVPAGG  ........PL  GLALRFRTTL
   15

        NOTCH_2_PR    NECLSEPCKN  GGTCSDYVNS  YTCKCQAGFD  GVHCENNINE  CTESSCFNGG
        SCS0006       ..........  ..........  ........PA  GTLATRNDTK  ESLELALVAA

   20
        NOTCH_2_PR    TCVDGINSFS  CLCPVGFTGS  FCLHEINECS  SHPCLNEGTC  VDGLGTYRCS
        SCS0006       TLQATLWSYS  TTVLVLRLPD  LALNDGHWHQ  VEVVLHLATL  ELRLWHEGCP


   25   NOTCH_2_PR    CPLGYTGKNC  QTLVNLCSRS  PCKNKGTCVQ  KKAESQCLCP  SGWA  GAYCDV
        SCS0006       ARL.......  ..........  .CVASGPVAL  ASTASATPLP  AGISSAQLGD


        NOTCH_2_PR    PNVSCDIAAS  RRGVLVEHLC  QHSGVCINAG  NTHYCQCPLG  YTGSYCEEQL
   30   SCS0006       ATFAGCLQDV  R.......VD  GHLLLPEDLG  ENVLLGCER.  .........R


        NOTCH_2_PR    DECASNPCQH  G ATCSDFIGG  YRCECVPGYQ  GVNCEYEVDE  CQNQPCQNGG
        SCS0006       EQCRPLPCVH  GGSCVDLWTH  FRCDCARPHR  GPTCADEIPA  ATFGLGGAPS
   35

        NOTCH_2_PR    TCIDLVNHFK  CSCPPGTRGL  LCEENIDDCA  RGPHCLNGGQ  CMDRIGGYSC
        SCS0006       SASFLLQELP  GPNLTVSFLL  RTRESAGLLL  QFANDSAAGL  TVFLSE  GRIR

   40
        NOTCH_2_PR    RCLPGFAGER  CEGDINECLS·NPCSSEGSLD  CIQLTNDYLC  VCRSAFTGRH
        SCS0006       AEAPGSPAVV  LPGRWDDGLR  HLVMLSFGPD  QLQDLGQHVH  VGGRLLA...


   45   NOTCH_2_PR    CETFVDVCPQ  MPCLNGGTCA  VASNMPDGFI  CRCPPGFSGA  RCQSSCGQVK
        SCS0006       ....ADSQPW  GGP FRG....  ...CLQDLRL  DGCHLPFFPL  PLDNSS.QPS


        NOTCH_2_PR    CRKGEQCVHT  ASGPRCFCPS  PRDCESGCAS  SPCQHGGSCH  PQRQPPYYSC
   50   SCS0006       ELGGRQSWNL  TAG....CVS  ....EDMCSP  DPCFNGGTCL  VTWN..DFHC


        NOTCH_2_PR    QCAPPFSGSR  CELYTAPPST  PPATCLSQYC  ADKARDGVCD  EACNSH  ACQW
        SCS0006       TCPANFTGPT  CAQQLWCPGQ  P.........  ..........  ..........
   55

        NOTCH_2_PR    DGGDCSLTME  NPWANCSSPL  PCWDYINNQC  DELCNTVECL  FDNFECQGNS
        SCS0006       ..........  .....CLPPA  TCEEVP....  ..........  ..........

   60
        NOTCH_2_PR    KTCKYDKYCA  DHF KDNHCDQ  GCNSEECGWD  GLDCAADQPE  NLAEGTLVIV
        SCS0006       ..........  ..........  ........D  GFVCVAEAT.  .FREG.....
```

```
        NOTCH_2_PR    VLMPPEQLLQ DARSFLRALG TLLHTNLRIK RDSQGELMVY PYYGEKSAAM
        SCS0006       ...PPAAFSG HNASSGRLLG .GLSLAFRTR .DSE...... .AWLLRAA AG

  5
        NOTCH_2_PR    KKQRMTRRSL PGEQEQEVAG SKVFLEIDNR QCVQDSDHCF KNTDAAAALL
        SCS0006       .......AL EG......... ..VWLAVRN. .......... G..SLAGGVR


 10     NOTCH_2_PR    ASHAIQGTLS YPLVSVVSES LTPERTQLLY LLAVAVVIIL FIILLGVIMA
        SCS0006       GGHGLPG... ..... ..... .......... .......... .....AVLPI


        NOTCH_2_PR    KRKRKHGSLW LPEGFTLRRD ASNHKRREPV GQDAVGLKNL SVQVSEANLI
 15     SCS0006       PGPRVADGAW HRVRLAMERP AAATSR.... .......... ..........


        NOTCH_2_PR    GTGTSEHWVD DEGPQPKKVK AEDEALLSEE DDPIDRRPWT QQHLEAAD IR
        SCS0006       ....WLLWLD G......... .......... .......... ..........
 20

        NOTCH_2_PR    RTPSLALTPP QAEQEVDVLD VNVRGPDGCT PLMLASLRGG SSDLSDEDED
        SCS0006       .....AATP. .......... .......... ....VALRGL ASDLG.....

 25
        NOTCH_2_PR    AEDSSANIIT DLVYQ GASLQ AQTDRTGEMA LHLAARYSRA DAAKRLLDAG
        SCS0006       .......... ..FLQGP... .......... .......... ..........


 30     NOTCH_2_PR    ADANAQDNMG RCPLHAAVAA DAQGVFQILI RNRVTDLDAR MNDGTTPLIL
        SCS0006       .......... .......... ...GAVRILL AENFTGCLGR H.........


        NOTCH_2_PR    AARLAVEGMV AELINCQADV NAVDDHGKSA LHWAAAVNNV EATLLLLKNG
 35     SCS0006       ..FASWPGTP APILGCRGAP .......... .........V CAPSPCLHDG


        NOTCH_2_PR    ANRDMQDNKE ETPLFLAARE GSYEAAKILL DHFANRDITD HMDRLPRDVA
        SCS0006       ACRDLFD... ...AFAC ACG PGWEGPR... ....CEAHVD PCHSAPCARG
 40

        NOTCH_2_PR    RDRMHHDIVR LLDEYNVTPS PPGTVLTSAL SPVICGPNRS FLSLKHTPMG
        SCS0006       RCHTHPDGR. .....FECRC PPG........ ...FGGP... ..........

 45
        NOTCH_2_PR    KKSRRPSAKS TMPTSLPNLA KEAKDAKGSR RKKSLSEKVQ LSESSVTLSP
        SCS0006       .RCRLP.... ......VP... .......... .....SKECS LNVTCLDGSP


        NOTCH_2_PR    VDSLESPHTY VSDTTSSPMI TSPGILQASP NPMLATAAPP APVHAQHALS
 50     SCS0006       CE........ ....GGSPAA NCSCLEGLAG ...QRCQVPT LPCEANPCLN


        NOTCH_2_PR    FSNLHEMQPL AHGASTV LPS VSQLLSHHHI VSPGSGSAGS LSRLHPVPVP
 55     SCS0006       G......... ..GTCRAAGG VSECICNARF S....GQFCE VAKGLPLPLP


        NOTCH_2_PR    ADWMNRMEVN ETQYNEMFGM VLAPAEGTHP GIAPQSRPPE GKHITTPREP
        SCS0006       ......FPLL EVAVPAACAC LLLLLLGLLS GILAARK... .......RR.
 60

        NOTCH_2_PR    LPPIVTFQLI PKGSIAQPAG APQPQSTCPP AVAGPLPTMY QIPEMARLPS
        SCS0006       .......... ......QSEG TYSPSQQEVA GARLEMDSVL KVPPEERLI.
```

```
        NOTCH_2_PR      VAFPTAMMPQ QDGQVAQTIL PAYHPFPASV GKYPTPPSQH SYASSNAAER
        SCS0006         .......... .......... . .......... .......... ..........
    5

        NOTCH_2_PR      TPSHSGHLQG EHPYLTPSPE SPDQWSSSSP HSASDWSDVT TSPTPGGAGG
        SCS0006         .......... .......... .......... .......... ..........

    10
        NOTCH_2_PR      GQRGPGTHMS EPPHNNMQVY A
        SCS0006         .......... ..... ..... .
```